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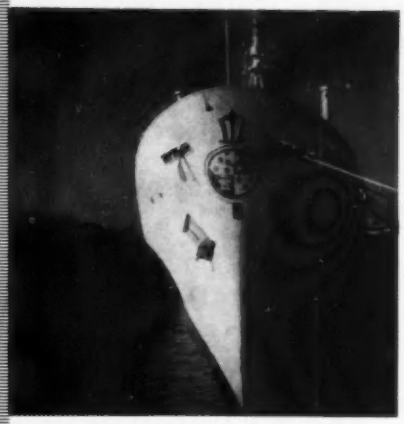

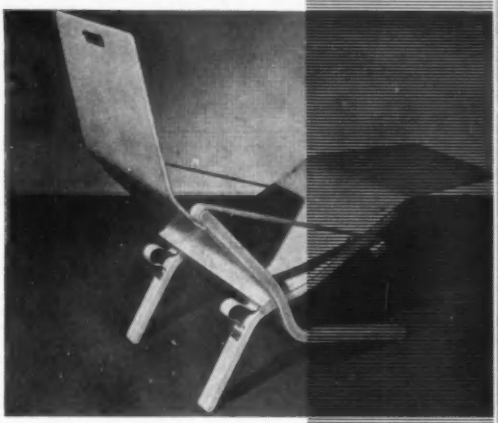

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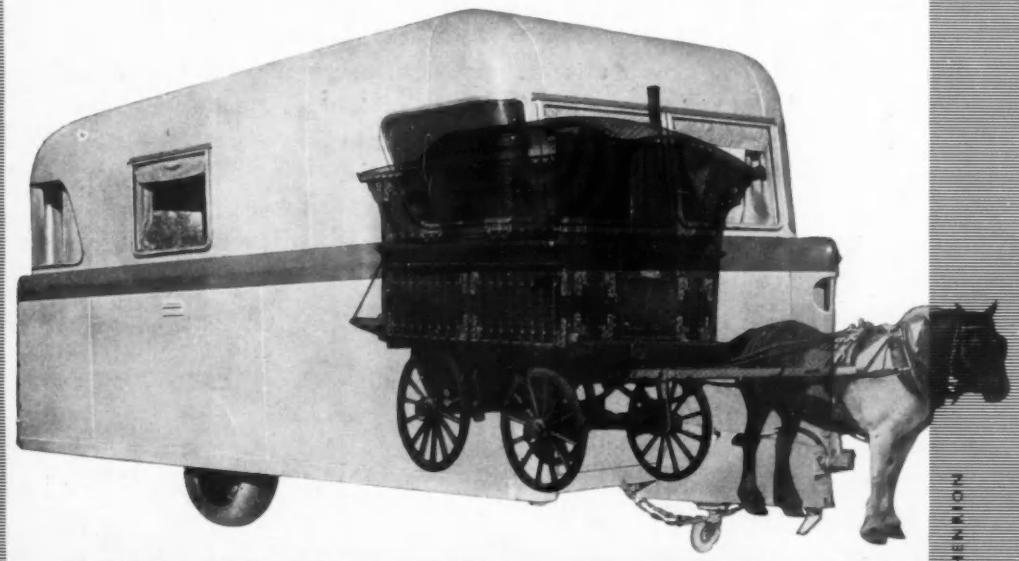

HENRION

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PERIODICALS

Silent Witnesses

IN DAYS GONE BY, the manufacture of nitro-glycerine was controlled by men seated on one-legged stools. It was reckoned that, if the strain of unbroken concentration made them sleepy, they would fall over and wake up. Modern control methods in chemical works present a different picture. The acetone plant at I.C.I.'s Billingham works, for example, contains nearly a hundred controls, yet it is looked after by only two men—constantly on the watch to ensure that everything is working smoothly. The main factor in bringing about this great change is Instrumentation. Close inspection of the acetone plant—typical of I.C.I.'s latest practice—reveals packed rows of fine copper pipes—the "nerves" of the control system—bending in and out of the strange silver shapes of the plant itself, and converging on a control room.

Here, in the "brain" of the plant, details of levels, flows, temperatures and pressures are received by the dials and controllers that line the walls from floor to ceiling. In the centre are two great desks, and here sit the operators, who from time to time press switches and enter readings in a book. It is a far cry from the men on the one-legged stools to these gleaming panels of silent witnesses. The instrument experts who are keeping I.C.I. in the forefront of automatic control in chemical plant have their eyes on the future. Already they have ushered in the change from recording to controlling instruments. But these controllers merely hold the process conditions to levels pre-determined by the operator. The next step is to provide a master control which will itself determine how the equipment should operate to give maximum output of a product of the desired quality. It is this type of control that I.C.I. chemists and instrument experts are now developing, with the full resources of a great company behind them.

Imperial Chemical Industries Limited

ICI

NUMBER 62

FEBRUARY 1954

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Design

Ship shapes and common sense

WE HAVE DEVOTED NINE PAGES of this issue to the new Greek liner 'Olympia' not because she is by any means the perfect example of modern interior design for ships, but because, apart from the well-known Orient liners, she is one of the few recent examples from British yards of an attempt to throw off long-standing conventions and to introduce some new ideas into an industry that could, if it would, become the finest flag bearer for British design.

Ship owners and ship builders are in a special relation to design in British industry. Not only are their products seen in all corners of the world, not only do they embody the work of a host of contributory industries, but, because of their long life and heavy usage, quality of materials and workmanship rate higher in ships than in most other forms of accommodation and transport. The opportunity to create something of real quality is presented in every ship that is launched, and it is the just pride of our famous yards that all the world recognises their high standards of construction and finish.

More is the pity, therefore, that one has to look far to find an industry less alert to fresh thought in interior design, more content with stock conventions, less inclined to match the skills and inventions of its engineers with equal imagination in furnishings and equipment, or more convinced that only those with long experience can be trusted to do the job.

Every profession creates its own science with which to blind a client into closing the shop door against all intruders. We believe that the eminent specialists in ship interiors are no exception and we grant that special knowledge of construction and specifications is required. But what is required can also be acquired. Problems of sheer, camber, access to services, and limitations stemming from ship shapes and from continuous movement are not insurmountable provided a designer works in close touch with the builders. Team work is the essence of success in this as in other fields of industrial design, but that points neither to the exclusive expertise of the few nor to exclusive reliance on past formulae. What is needed today is a marriage between the experienced 'know how' of the specialists and the fresh ideas of our modern interior designers.

Other countries are fast throwing the old conventions overboard. Only Britain, steeped as she is in traditions of sound engineering and first-class craftsmanship, seems still to be insensitive to the common sense of bringing her most historic industry up-to-date in every aspect of design.

POINTS and POINTERS

PARABLES FOR FURNITURE The bandwagon for contemporary furniture enthusiasts is rolling along at a slowing pace: the slower it goes the more people there are to catch it up and scramble aboard. The early pioneers are feeling a little crowded in the front seat and are almost too fully occupied in keeping the wheels turning to bother much about blazing the trail. We need pathfinders urgently. They could come up from the ranks of the pre-war *avant garde*, willing to restyle or even embroider their snow-white Bauhaus mantles, or they could, to mix up the metaphors still more, be spotted among the senior prefects of the mid-century school.

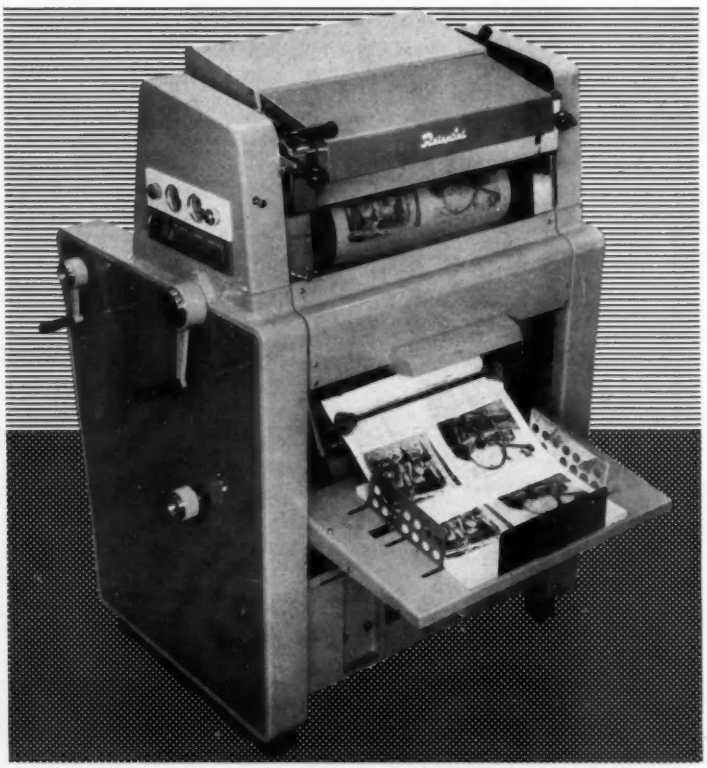
The enrolment of new pupils for contemporary design at the British Furniture Trades Exhibition, which opens in a few weeks' time, promises to be staggering in numbers. The prospect of finding inspired teachers is not so good, although mounting competition from abroad should create full employment for the best of them and encourage others to refine their art. Perhaps no less urgent is the problem of keeping the boys in order. Overcrowding seems to be a common fault in our post-war classrooms, and not everybody can see the blackboard. Fortunately there are enough designers on hand who are best fitted to stay secure but alive in the contemporary movement. That they should also stay alive, in the other sense of the word, cannot be disputed, but how many manufacturers are willing to have their homework corrected?

HONOURS In the New Year's Honours List we congratulate Herbert J. B. Manzoni, CBE, Birmingham City Engineer & Surveyor, who became Knight Bachelor. Sir Herbert Manzoni, on behalf of Birmingham Corporation, helped to organise the CoID 'Outdoor Seat' competition, and was one of the judges.

The Royal College of Art, as we know it today, with its keen interest in industrial design training, is largely the work of its principal, Robin V. Darwin, a member of the CoID, who received the CBE. R. B. Fishenden, editor for 19 years of THE PENROSE ANNUAL, and William Johnstone, Principal of the L C C Central School of Arts and Crafts, were awarded the OBE. Amongst the new MBEs are Percy E. Curnock, ceramic artist at Doulton & Co Ltd, and John S. Ball, head of design and development at Henry Simon Ltd.

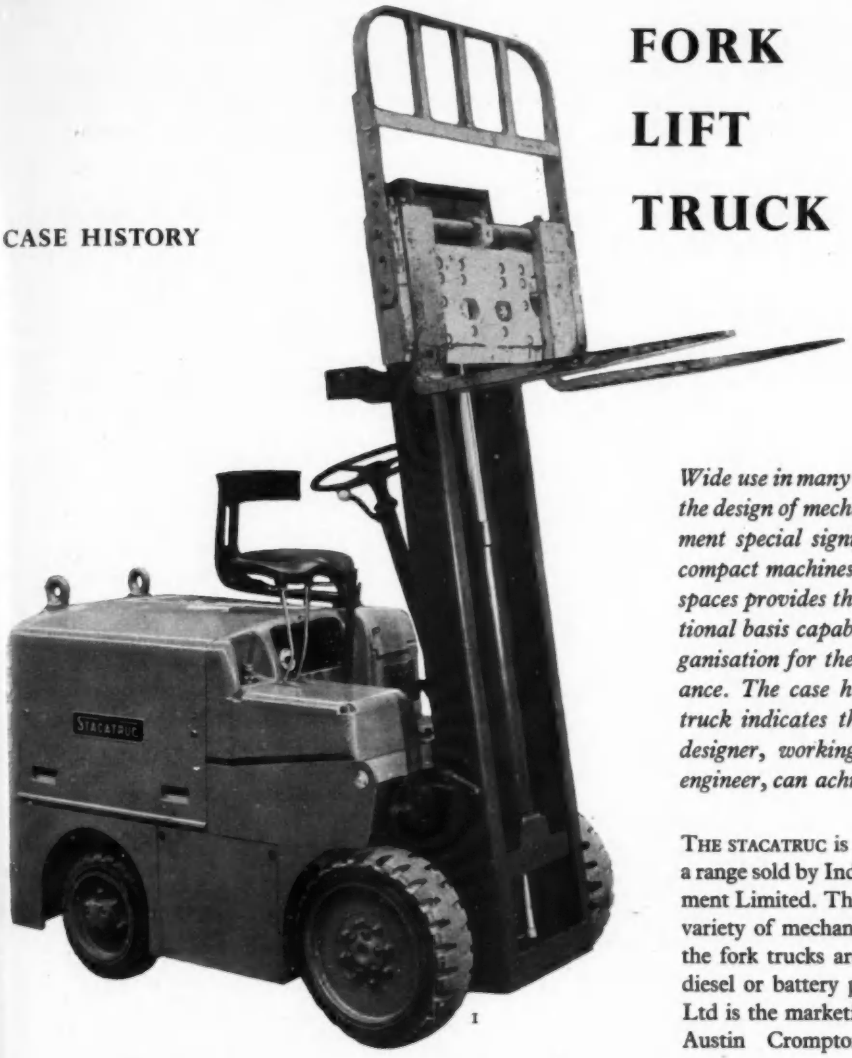
NEW IN OFFICE Almost everybody must be concerned in some way with office appliances that range from the humble filing cabinet to the electrical accounting machine with nearly 18,000 parts. In this country office equipment comes from a relatively young industry, susceptible to frequent technical developments and design changes in order to keep up with new ideas on speed and efficiency and new standards of taste in office furnishing. In an attempt to sum up these changes and point to worth-while future development, we are publishing in our March issue the first in a series of five articles devoted to office appliances. Subsequent articles will appear in alternate months.

The ROTAPRINT machine is shown here as a foretaste of the series. It indicates the high design standard now being achieved by several firms in the industry, who appreciate that an efficient mechanism must also appeal to people naturally sensitive to proportion, finish and colour. The ROTAPRINT was designed by A. B. Kirkbride in collaboration with C. D. F. Middleton for Kaye's Rotaprint Agency Ltd.



CASE HISTORY

FORK LIFT TRUCK



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Wide use in many commercial fields gives the design of mechanical-handling equipment special significance. The need for compact machines to operate in confined spaces provides the designer with a functional basis capable only of limited organisation for the sake of good appearance. The case history of this fork-lift truck indicates the extent to which the designer, working with the mechanical engineer, can achieve his object.

THE STACATRUC is a fork-lift truck, one of a range sold by Industrial Truck Development Limited. This range includes a wide variety of mechanical-handling aids, and the fork trucks are available with petrol, diesel or battery powered motors. I T D Ltd is the marketing organisation for the Austin Crompton Parkinson Electric

1: *The counterweight carries the towing link, and also the rear sling eyes for lifting the machine bodily. The front eyes are directly over the front wheels. The forks are at half-height, showing the guard projecting over the top of the mast to protect the driver. The cavity in the heel of the forks makes damage to the pallets virtually impossible.*

2: *The handling of the first and last letters makes a trade mark much inferior in design to the truck itself. Awkward trade marks are common in the engineering industries, but unusual in a firm such as Industrial Truck Development Ltd, whose publicity and other flat design is of the same high standard as its products.*

3: *The large, and heavy, battery forms part of the balance weight which keeps the truck stable and is easily accessible. It can be removed by sliding out sideways on to a special wheeled carrier. In this photograph, the seat has been swung right out from the truck to give access to the battery covers.*

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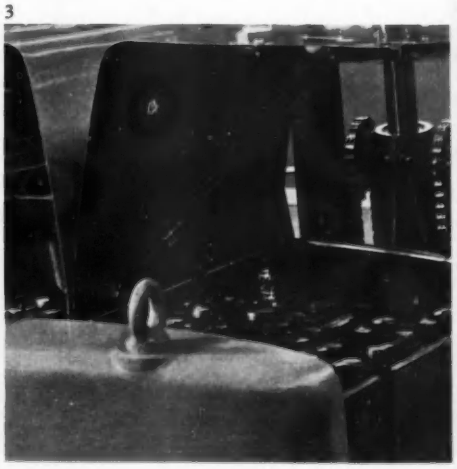

Vehicle Company, which is responsible for the design, development and manufacture of the equipment. The two companies form a closely integrated organisation for the development of materials-handling equipment. Fork-lift trucks come from a progressive industry in which design for production coupled with appearance is beginning to play an important part in the expansion of its output.

ITD Ltd is the largest of about 15 British companies selling fork-lift trucks – during 1952 it sold over 25 per cent of the trucks made by the industry – and it is the only company which covers all three types of power in a complete range. The average production of any one model is around 200 a year, but this varies between diesel, petrol and electric trucks; production of petrol trucks is roughly half that of the other types, and is steadily dropping in this country.

Models are the result of three separate approaches. The first is from a set of basic specifications compiled some two or three years ago by the projects and planning department of ITD Ltd. The essential minimum requirements to cover a range of truck capacities from 2,000 to 6,000 lb were analysed from a survey of all existing competitive machines, including American, German, Italian, French, Swedish and British, and this is continually revised to keep it up-to-date. Secondly, existing models are modified to improve performance or appearance. Modifications in the last few years have been due to new materials, driving motors, manufacturing techniques, hydraulic systems, suspensions, and during this time ancillary equipments have been developed to weight, shovel, rotate and tip the materials being handled. The efforts to provide easily cleaned surfaces lead to continual simplification of appearance, with flush-joined panels and the minimum of projections. Thirdly, a very close liaison is maintained with the service department, which provides information on modifications to give better service or accessibility.

From these various sources, data are available to the sales, service and production staff who jointly decide whether a new model is justified. If they do decide this, they put a rough specification before the board of directors and state their case for the new model. If approved, an appropriation is made for development of a prototype, and a further sum is allocated to enable in-line production to start if the prototype is successful. The provisional specification is meanwhile used to obtain advance orders. The board makes the final decision, but having made this it is not further con-

4: *The seat here is swung completely the other way to enable the covers for the battery-charging socket to be opened. The actual seat is hinged from the back so that the driver's weight operates the plunger contact directly above the charging socket. If the driver is not in position this contact is not depressed and the whole truck is immobilised.*

5 *and* **6:** *Below are shown the contactors, and, right, the motor and hydraulic pump which are in easily accessible compartments on either side of the chassis. Both these components are in constant operation and ease of inspection and service will prolong their life considerably.*

7: *The whole machine is extremely rugged to withstand the rough treatment which materials-handling equipment usually receives, and at the same time is easy to clean and service. Both pairs of wheels are fitted with cushion tyres and are kept within the body line, so that the massive counterweight acts as a fender. Note the driving mirror on the mast.*

4

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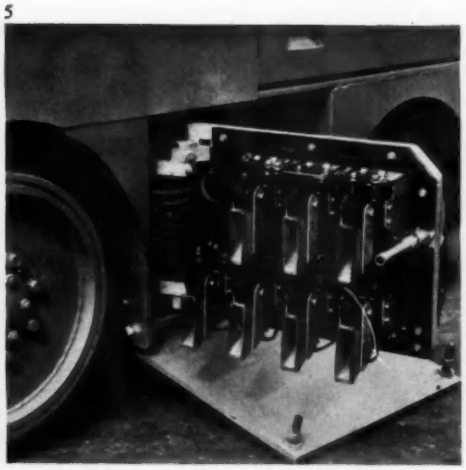

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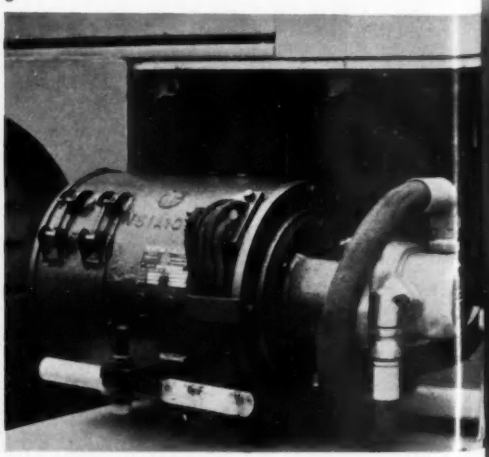


cerned with the project, which is mainly in the hands of the chief designer and the general managers of the two companies.

Design requirements

A fork-lift truck must be able to lift pallets carrying heavy loads upwards by as much as 14 ft, whilst the whole machine with load has to be manœuvrable in extremely limited spaces. The final design of any truck is a compromise between the need for strength and for smallness: a compromise which produces a design both complex and compact.

The lifting mast is just forward of the front wheels, which are the driven pair, and these wheels act as the fulcrum of a balance. The machine must be capable not only of balancing the total weight which it can carry, but also of being completely stable when this weight is lifted to its maximum height. This stability must hold for motion in either direction, or in a turn, with a load of any normal size carried in any position. The physical size of the truck completely defines the space within which it can work, both the width of aisle within which it will stack, and the width of intersecting aisle which it needs to turn in. Rear-wheel steering enables it to turn within its own length. This limitation on the size of the truck results in the development of a short, narrow chassis with a counterweight, rather than a simple, unweighted chassis which would need to be both wider and longer to give the same stability. In most models, for instance, the counterweight alone weighs about half the total lifting capacity, whilst the truck unladen weighs about twice the weight which it can lift.

7

The chassis is of very heavy steel plate, upon which the 6-hp motor and front axle are mounted direct. The rear axle is pivotally mounted on two leaf springs, and a form of steering gear is used which gives an increasing ratio as wheel lock and tyre resistance increase, as well as providing nearly 180° of steering lock. The battery is mounted on the chassis and can be removed either by overhead crane lift or by rolling off sideways on to specially designed battery carriers. However, it is not necessary to remove the batteries to charge them, and they give about a 10-hour working cycle without recharging. The lifting mast is of heavy channel section, braced to resist twisting movements, and is carried by the front axle. Hydraulic jacks tilt the mast 10° backwards for normal load carrying when in motion, to 3° forward for loading and unloading. The hydraulic lifting cylinder is mounted inside the mast and is connected to the forks through two chains, each more than capable of sustaining the full load.

The hydraulic pump is driven by a separate electric motor of 5½ hp, both mounted in an easily accessible compartment in the chassis. The forks are of high tensile steel, with a cavity forged into the heel which eliminates serious damage to the pallets. An adjustable guard at the back of the fork protects both mast and driver, and further safety guards can be built on to the truck.

The controls in a STACATRUC are very similar to those of a car, with normal steering wheel, right-foot operated accelerator and brake pedals,

and handbrake. A lever directly under the steering wheel controls the direction of travel, whilst tilting and lifting movements of the mast are controlled by two right-hand operated levers. All controls are interlocked to prevent incorrect operation, and the truck is immobilised if the driving seat is not in use. A top speed of 5 mph in either direction is given by a four-speed accelerator. The driving seat can be swung through 180° so that the driver can see round a load when driving forward, and all controls are positioned to be accessible from wherever the driver is sitting.

The proportions of the truck are largely defined by its internal equipment, and its pleasing appearance is due to careful detailing and the flowing surfaces which make it easy to clean. The cast balance weight is practically the only thing which gives the designer any formal freedom, and this has been shaped to emphasise both its own weightiness and the solidity of the whole truck. The enclosing bodywork is mostly in the form of removable panels to give complete accessibility; in spite of this, it remains visually one unit, not the collection of component covers which it so easily could have been. Standard finish is blue and grey, with all load-carrying parts in yellow, but a few clients use special colour schemes. One uses a thick diagonal stripe of black and yellow to differentiate the truck completely from its environs.

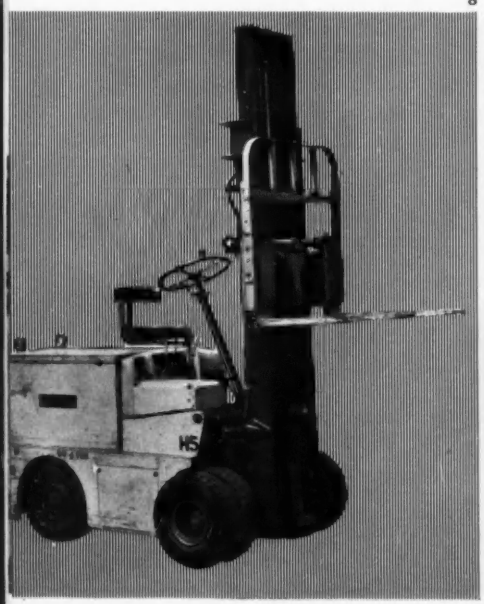
Buyers of materials-handling equipment are usually engineers, and this has been kept very much in mind during the design of these trucks. Separate market research showed a strong dislike for anything flashy, or even startlingly new in appearance. In other industries circumstances like these have often produced stagnation in visual design, due perhaps to a theory that a taste for conservative design is evidence of a lack of taste altogether, and hence appearance design can be dispensed with. The producers of the STACATRUC have treated this theory with the contempt it deserves.

The practice of redesigning equipment so that its appearance changes enough to make the earlier model seem out-of-date is commonly associated with the United States. In this country more and more cases are to be found of design for artificial obsolescence: the easy formula for gaining sales appeal. But in the long run both maker and buyer are badly served: the one finds himself with a bogus design policy, unrelated to the function of his product, while the other gets tired of tricky styling when his latest purchase turns out to be virtually the same as his first.

It is refreshing therefore to find a leading firm among a progressive group of manufacturers content to design by evolution. Designs for new models belong intimately to developing techniques and the discovery of new uses for fork-lift trucks. The market served dislikes flashy work, for the engineers who buy the equipment are conservative. Where such things as economy in layout or improved manœuvrability have been achieved the buyers would look for a clean, straightforward design expressing to the full these new qualities.

J.N.S.

8



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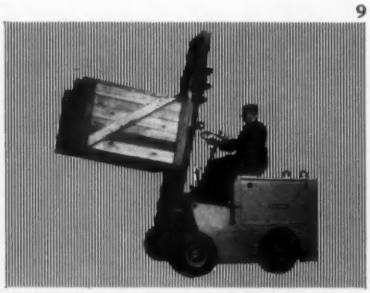

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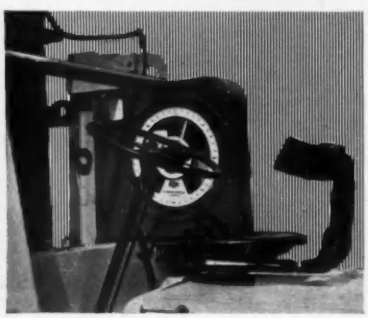
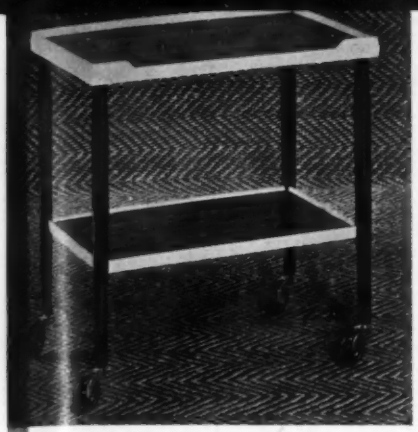


8: *The first model of a heavier truck used available castings. Because the new machine was bigger in all dimensions, the integration of the older design was lost.*

The modified truck, **9,** *had a new cast weight and inspection covers. The new counterweight was the full width of the wider chassis, so that the ledges and projections of the older model gave way to easily cleanable flush surfaces. The total laden weight of this truck is about 1,200 lb heavier than the older design, so that heavier pneumatic tyres are used, with four front driving wheels.*

10: *A new auxiliary fitting is the* WHEELERWEIGH, *an automatic weighing device. Normally locked rigidly when the machine is in motion, it can be released to weigh automatically the load on the front forks. This device, which virtually weighs in transit, should add to the time saved by the use of modern materials-handling equipment.*



Tea trolley in walnut and beech. The use of contrasting woods emphasises its light and simple structure. Designer: P. K. Bridson. Maker: Kandya Ltd.

Occasional table with top and shelf in plywood and legs in oak or beech. A DENBY *pottery bowl is recessed into the top and can be used for flowers or an ash-tray.* Designer: Ewart Myer. Maker: Horatio Myer & Co Ltd.

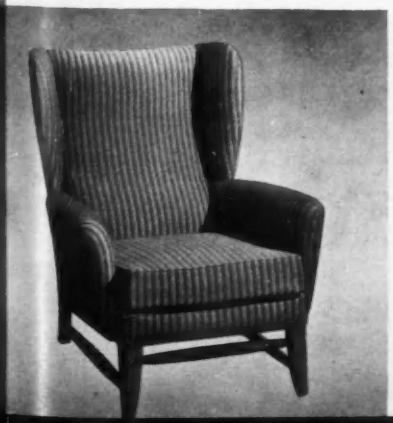
Small dressing-chest with an adjustable mirror. Beech, plywood and blockboard are used in the construction with a natural walnut finish. Designer: W. H. Russell. Maker: Gordon Russell Ltd.

REVIEW OF CURRENT DESIGN

The items shown are up to the standard acceptable for 'Design Review', the photographic index of current British products, to be seen at the London headquarters of the Council of Industrial Design.

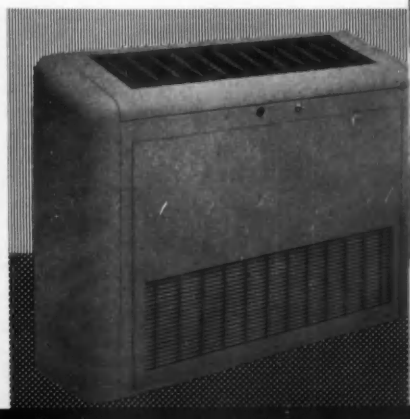
One of the new range of FERRANTI *radiant electric heaters. Ferranti's pioneered the development of this type reflector heater in 1926 and this model represents the most recent stage in its evolution. New government safety regulations dictate the large size of the protective wire guard though in this case it has been designed to contribute a pleasing decorative quality. The small base is weighted to give the necessary stability.*

Winged armchair in a traditional style, upholstered with tension springs on a beech framework. It has a reversible DUNLOPILLO *cushion.* Designer: M. E. P. Courrouau. Maker: William Birch Ltd.



This portable radio combines the use of a wooden cabinet covered in leathercloth with a moulded plastic dial panel and speaker grille. Maker: Philips Electrical Ltd.

Electrically driven fan convector heater for use in large premises. The air is blown over hot-water pipes connected with a central boiler. Designer: P. A. Coles. Maker: Copperad Ltd.



1: *Three of a series of earthenware vases and carafes obtainable in a variety of shapes and patterns.* Designers: Shapes by the Poole Design Unit with decorations by A. B. Read. Maker: Carter, Stabler & Adams Ltd.

2: *Simple and pleasing stoneware pottery for the kitchen. It is finished in blue and green.* Designer: H. B. Mitchell. Maker: Lovett's Potteries Ltd.

3: *Table lamp with a base made up of brass tube surrounded by a cage-like structure of metal rods. The decoration on the shade is screen-printed.* Maker: Hiscock, Appleby & Co.

4: *All-cotton curtain fabric. The pattern is composed of plant motifs glimpsed through window-like squares.* Designer: Sims & Co. Maker: F. W. Grafton Ltd.

5: *Wiry pattern of intersecting ovals printed on spun rayon. There are four colour combinations on a white ground.* Designer: John Murray. Maker: Haworth Fabrics Ltd.

6: *Plasticware for picnics or the nursery in pale blue, peach or natural colours. The tray is of polystyrene, the cup and beaker of polyethylene.* Designers: A. E. Harvey and the firm's design staff. Maker: Jarrett, Rainsford & Laughton Ltd.

7: *Hand-made sherry glass and vases. The spiral pattern of black glass rods gives a fascinating effect when seen against the light and also serves to describe the form.* Designer: Fritz Lampl. Maker: Orplid Glass Ltd.

8: *Wrist watch with a chrome and stainless steel case. Only the two-hour intervals are numbered allowing the numerals to be larger and clearer than is normally possible.* Maker: Smiths English Clocks Ltd.

9: *Hand-made goblet richly engraved with a pattern of growing corn. The stem is cut to form flutes.* Designer: J. H. Cunneen. Maker: The Stourbridge Glass Co Ltd.

10: *Earthenware for dinner and tea. The border has a blue ground with polka dots in white.* Designer: S. C. Talbot. Maker: A. E. Gray & Co Ltd.

11: *Body carpet of wool, jute and cotton in dark and light green with other colour combinations available. The spiky arrow-like motifs can be used to give emphasis to a particular direction in a room.* Designer: Margaret E. Waterton. Maker: The Empire Carpet Co Ltd.

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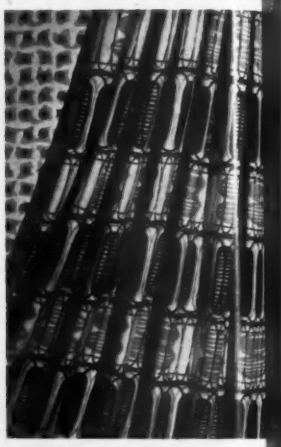


Enthusiasm unlimited

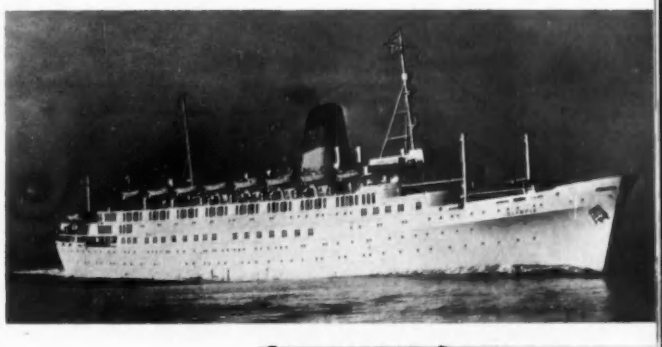
in Greek ship interiors

Michael Farr

T S S 'Olympia' is a travelling hotel and its passengers are on holiday. For the designers this involved conflicting problems: their work had to be durable and decorative. The uniformity imposed by functional structures was in their minds one minute, variety in colour and pattern the next. Their solutions point to inherent but not insurmountable difficulties in the design of interiors for a passenger liner.

A SHIP TO SAIL is one thing, but a ship to sail in with enjoyment is another. Both can be achieved if the naval architect and the interior designer collaborate from the earliest stages of planning. In the case of this ship, TSS 'Olympia' of 23,800 tons, a co-ordinating theme was worked out with the owners, the Greek Line. It was not a design theme as such, but a plan to offer passengers in the tourist class a new and better standard of travel.

The 'Olympia' is intended first for North Atlantic travelling; later she will cruise in the Caribbean and still later in the Mediterranean. The trade to and from North America is particularly competitive in the tourist class. Few if any ships can now offer fares as low as £60 for the single journey: the figure usually thought reasonable is between £65 and £70, although some lines charge more. And when he pays these low fares the passenger has experienced hitherto only a moderate standard of cabin comfort, with severely limited opportunities to benefit from the public rooms and open decks. To meet their needs some shipping companies prefer to convert existing ships to carry greater numbers rather than meet the capital costs of a new vessel specifically planned to attract the tourist passenger. It is here that the 'Olympia' deserves to make an impression, for her owners have set out to accommodate 1,150 passengers in the tourist



The crest of the Greek Line is proudly displayed on the bows of the 'Olympia'. The managing director of the Line, John Goulandris, exerted considerable influence on the appearance of the ship, to be seen in photograph above with the raked bows and flared superstructure. He also helped in designing the funnel of unconventional shape to achieve a more efficient airflow and keep smoke away from the decks.

The Aegean Bar. For first-class use, this is one of the best public rooms in the ship. The bar projects deep into the room and has a robust, ship-like character partly suggested by the attendant stools which are moored to the foot-rail. Good use is made of crisp, clear colours especially for the upholstery fabrics. The walls become decorative with dyed veneers. The only weakness is the floor pattern of dolphins in many colours, which becomes too insistent. Designers: Emmanuel Lazarides and Stafford Unwin.

class while only 138 can travel first class. In addition a number of cabins on the upper deck, normally devoted to tourist use, can be converted to carry more first-class passengers. Of the 21 public rooms seven are reserved for first-class use: the remaining 14, correspondingly larger, are tourist, although first-class passengers can use them if they wish.

The designers

The keel was laid in 1951 in the yard of Alexander Stephen & Sons Ltd. Because of the builders' practice of welding prefabricated steel sheets to form the decks, so giving a dry area beneath, work on the interior fittings began comparatively early. Patrick McBride of McInnes Gardner and Partners acted as superintendent designer and also carried out exclusively the design of three public rooms, all of them in Jacobean and eighteenth-century styles. The drawing office of Alexander Stephen was also concerned with design details in all parts of the ship. The general character of the interiors was first determined by Emmanuel Lazarides, a Greek architect with a *Beaux Arts* training, who was called in by the owners. Although his schemes still predominate in the main passenger areas, further developments in the design came later, when another architect, Theodore Alexander, was introduced to the work. In many cases it is not possible to divide accurately their spheres of influence for designing continued with work in progress.

The part played by the owners, particularly by John Goulandris, is equally difficult to define. Mr Goulandris was in touch with the work all through. He advised on layout of public rooms and chose some of the textiles, but chiefly his influence shows in the profile of the ship, the raked bows, flared bridge superstructure and the funnel which he helped to redesign and found that his version produced a more efficient airflow.

The interiors of the 'Olympia' are unique. They are the result of the owners' willingness to allow unlimited

ABOVE: *A corner in one of the two first-class dining-rooms. The wall plaque pig is strangely out of key with the graceful and refined design scheme.* Designer: Emmanuel Lazarides.

BELOW: *Part of the tourist-class dining-hall. The chairs with backs of green and fronts of orange leather, together with the window curtains, produce a gay and inviting effect.* Designer: Emmanuel Lazarides.

ABOVE: *One of the first-class dinirg-tables with the nearside 'fiddle', or ledge to prevent crockery sliding on to the floor during rough weather, folded down. It is solidly constructed and anchored to the floor: an example of well-designed ship furnishing common to many yards.*

BELOW: *One side of a pair of double doors leading to the tourist dining-room. They are of* ARMOUR-PLATE *glass with boldly conceived strengthening brackets and handles of metal. Similar doors in this striking design are to be seen in other parts of the ship.* Designer: Emmanuel Lazarides.

This chair with leather upholstery in green and orange is to be found in all the dining-rooms. The legs are supported by shallow cuts, mounted on a universal joint. By this means the conventional chain attachment to the floor is dispensed with, as the cups pivot to accommodate varying directions of thrust and grip the floor to prevent the chair sliding when the ship rolls. The chair itself is a classic example which might well become commonplace in other ships. It won first prize for Joseph Johnstone Ltd, in the Ships' Furniture Competition, organised in 1950 by the Scottish Committee, Council of Industrial Design.

BELOW: *Mural in the tourists' gymnasium in* FORMICA *perhaps one of the most imaginative designs yet carried out with this material. Murals like these could have been used to enliven other areas in the ship and be enjoyed more frequently by passengers.* Designer: Tom Gourdie.

BELOW: *The art gallery, an innovation in passenger liners, deserves more credit for the idea behind it than for its execution. In a series of exhibitions contemporary painters will be asked to show their work. But the gallery is only six-feet wide and is too narrow for passengers to see the pictures in comfort.* Designer: Patrick McBride of McInnes Gardner and Partners.

RIGHT: *The Bookworm, a library and reading-room for tourist passengers. The furniture, especially the long, sloping counter on the right, is good in itself, but much of the effect is lost against the background of interlacing floor patterns and wall veneers. Within the framework of a contemporary style the designer has worked hard to find a decoration for everything.* Designer: Emmanuel Lazarides.

RIGHT: *The tourist writing-room, or Scribe, is more dignified. The arrangement of tapering tables along the wall is an intelligent way of making the most of the windows. But where the Bookworm exploited decoration, the Scribe is busy with form: on the left, for example, the grotesque wall table in a quartic shape with mammoth supporting poles. In both rooms the upholstery fabrics by* OLD BLEACH *give relief to the visual strain.* Designer: Emmanuel Lazarides.

experiments to be made with decorative effects. The designers, chiefly Lazarides, sought originality for its own sake in their efforts to produce a suitable environment for people travelling between one continent and another. Design maxims applied to the ordinary run of human living cease to hold their sway and we must attempt to judge this ship from a less familiar standpoint. With the exception only of ships belonging to the Orient Line, such as the 'Orcades', 'Orion' and 'Oronsay', the 'Olympia' has interiors designed with more gusto and imagination than those of any British passenger liner built since the war. That the Modern Movement in architecture and design has not been influential long enough or the designers on the 'Olympia' sufficiently aware of its implications is unquestionably true. So too it is remarkable that barely a trace of the Festival of Britain style can be detected. With little to help them from an established tradition of design and decoration the designers were left to create their own aesthetic standards.

Unco-ordination

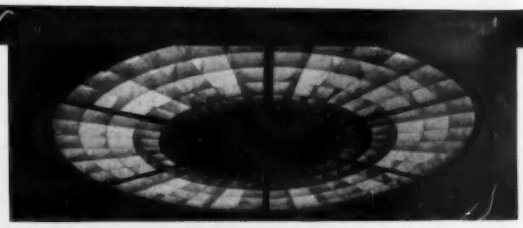
The value of having a co-ordinating design scheme in the ship has been appreciated, but only in areas where continual passenger movement is to be expected, and in the cabins. In neither group of places does the traveller wish to remain, though the related colourings, uncomplicated built-in furniture and so on will

ABOVE: *Wonderland, the tourist children's playroom, is a small but brilliantly colourful area. The walls including the murals, some of which are not shown here, are of* WARERITE *with aluminium dividing strips.* Murals: Dorren Noble. Ceiling: Emmanuel Lazarides. Design co-ordinator: Theodore Alexander.

ABOVE: The Zebra Room provides tourist passengers with a meeting-place, cocktail lounge and night club. The free-flowing, bold and imaginative upholstery pattern designed by Tibor Reich, although good in itself, creates confusion with the jagged floor motifs. Harmony in the design scheme could have made the area equally arresting but more inviting. Designer: Emmanuel Lazarides

ABOVE, RIGHT: The Mycenaean Room, a first-class lounge, dance space and entertainment area is an example of jazzy decorations, each in a different tempo. The lack of harmony can be seen plainly where the scroll motifs meet the zigzags of the dance floor. The visual disturbance is further augmented by semi-realistic wall decorations and the angularity of some of the chairs. When the ship herself is moving passengers may well feel uneasy. Designer: Emmanuel Lazarides.

RIGHT: As one of the tourist lounges, the Derby Room is chiefly remarkable for its *Beaux Arts* manner dating from the 'twenties. Curlicue ironwork and zigzag lines predominate among the shiny veneers. Something has been redeemed by the furniture and particularly by the upholstery fabric: one of the most exciting Jacquard patterns to be woven since the war, by Marian Mahler for Edinburgh Weavers. Designer: Emmanuel Lazarides.



RIGHT: *Louvered light fitting with built-in air vent. The design gives a good general illumination and is to be seen in several of the public rooms.*

LEFT: *The Purser's Square, an area of general passenger movement which is skilfully made non-directional by the decorative, inlaid floor pattern.* Designer: Emmanuel Lazarides.

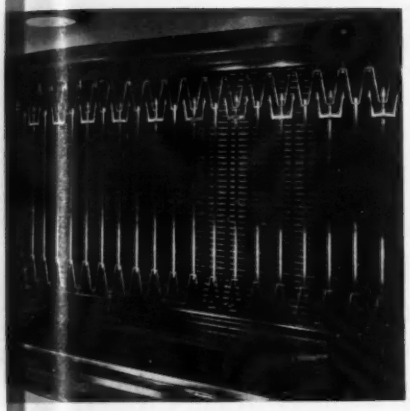
tempt him to do so. The cabins, especially for tourist passengers, are much more 'finished' here than on most North Atlantic liners, but it is not the owners' intention that they should be any more than comfortable sleeping spaces. Instead, the large number of public rooms has been planned as living areas for all passengers. With the exception of the Aegean Bar, the Scribe and the Bookworm, passengers in these rooms, with rough weather without, may well feel themselves trapped in a series of shifting, unfamiliar scenes.

On the other hand to show how faith in experimental design can be fully justified, there are the tourist gymnasium and the nearby children's playroom. Both places are triumphant in the use of decorative plastic sheet; both were skilfully carried out with a light, gay touch which makes the décor in the first-class playroom feeble if not old-fashioned.

The deliberate declassification of the public areas in the liner has, perhaps, been taken to extremes. We are faced with the paradox of having two period rooms, the card room and the drawing-room, for tourist passengers and the jazzy Mycenaean room for first-class passengers. There is a further paradox for the *moderne* rooms, Mycenaean, Derby and Zebra, all unmistakably related to the Parisian styles of 1925, possess, like the rest of the ship, wood and metal work superbly made to last indefinitely. Yet 15 years ago they would have been dated. Riviera swimming-pools, French night clubs and London Corner Houses epitomise a well-tried system of décor to bolster the spirits of the rich and poor alike on holiday. But there are other ways of doing it and contemporary designers should be encouraged to find them instead of resting on the jaded laurels of past extravaganza. This is no prudish suggestion that vulgarity should be eschewed in modern design for leisured living; but vulgarity should be used with discrimination if it is to succeed instead of sicken.

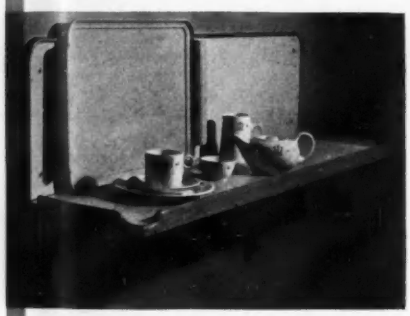
Except for the louvered ceiling light fittings to be found in many places, there is no single motif that runs through the rooms to give a sense of homogeneity and balance. The chairs in the dining-rooms, lounges and

LEFT: *Some furniture in Radio Square, a general area leading from first-class quarters on the Sun Deck. Little can be seen of the garish floor pattern (Emmanuel Lazarides).* Designers: (chairs) Dennis Lennon; (table) Stafford Unwin.



LEFT: *Grille over the counter of the purser's office, incorporating the crest of the Greek Line.* Designer: Emmanuel Lazarides.

RIGHT: *An example of cool, clear colouring in the corridors and alleyways.* Designer: Theodore Alexander.

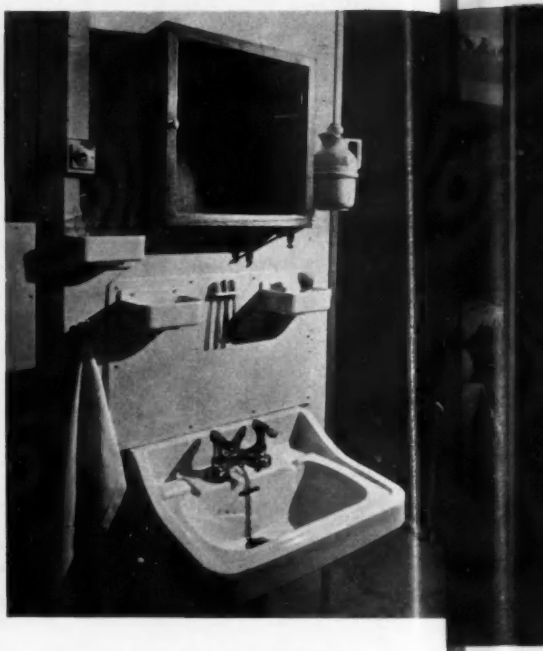


LEFT: *This folding wall-rack lines up with other items of trim such as banisters and wall rails. The pottery, which is for tourist passengers, bears the crest of the Greek Line.*

RIGHT: The Taverna, a bar for tourist passengers. This fantasy based on a typical Greek tavern has gone rustic to the extent of imitation crazy-paving. The bar itself, not shown, has a tiled roof, but equally inexplicable are circle drawings on the walls. Designer: Emmanuel Lazarides.

FAR RIGHT: Almacks, the tourists' card room, with thick wooden columns supporting seemingly weighty ceilings. False windows are placed within the real ones. If incongruity has to be stressed then the Bauhaus-type light fittings provide it. Designer: Patrick McBride of McInnes Gardner and Partners.

ABOVE: *A typical tourist-class cabin. This one, with four berths (only two shown), has an 85-sq ft floor area, excluding the built-in wardrobe, dressing-chest, divan and two chairs with fabrics designed by Tibor Reich. In an adjoining compartment there is a second wash-basin set between shower bath and lavatory. Such finely designed cabins set a new standard for tourist travel.* Co-ordinating designer: Theodore Alexander.



ABOVE: *The wash-basin and toilet unit in the same cabin. Good use has been made of robust, well-designed* ROANOID *plastic containers.*

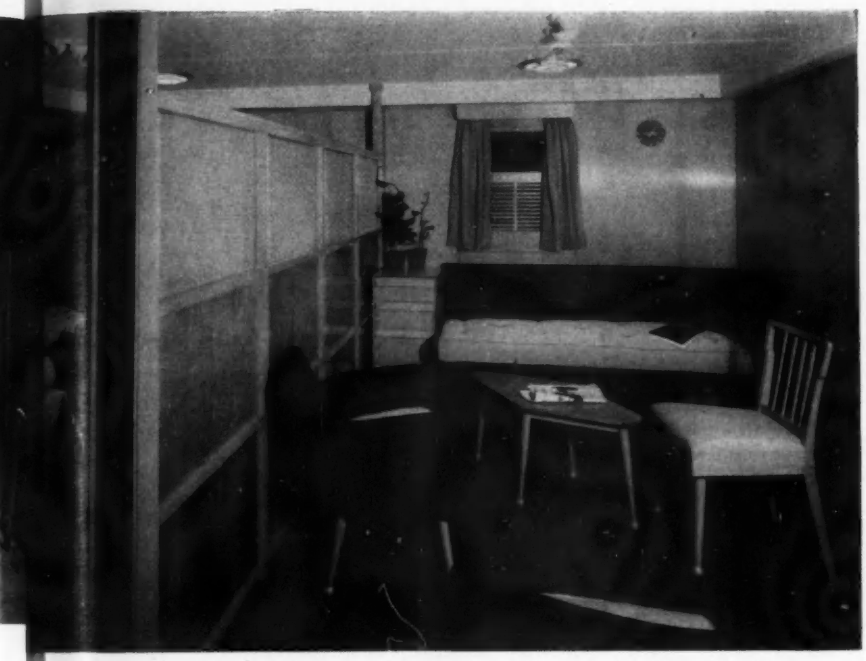
cabins are good, judged by modern design standards, the show-wood frames of some of them giving a sense of continuity, but the fabrics, wall veneers and decorations and the floor patterns, some good, some bad, hopelessly conflict. The realisation that no one designer with prestige and experience with modern design projects has overseen all, in the manner of a co-ordinating architect, is inescapable. That such a man should have been employed with the necessary powers cannot be questioned nowadays, when most major architectural projects are designed throughout by a leader and his team.

Better design for basic needs

In the corridors and cabins the designers, now more sure of their objective, have set a remarkably high standard, especially for tourist accommodation. The fares charged by the Greek Line for tourist travel over the Atlantic, in themselves competitive, are more than justified by the cabins alone. Fifty per cent of the tourist accommodation is made up of two-berth cabins, and approximately half of the total number of tourist passengers have private showers and toilets.

Colour has been used to co-ordinate the corridor and cabin quarters. Two shades of blue together with lemon yellow are used for the corridors. In the cabins the combinations are either lemon yellow and light blue or orange, and duck egg blue and orange. These colours are used in simple but effective ways: in a lemon-yellow cabin, for example, the door to the shower would be picked out in light blue. Uncomplicated by the decorative immaturity of the public rooms all cabins and working areas down to the engine room express their function with simplicity. Attention has been given to the refining of essential details and if some of the plastic equipment, light shades and door knobs, etc, is feeble in design, it by no means mars the general scheme.

But these are small criticisms of a ship which possesses so many original ideas. The officers' quarters have been designed up to the standard of the best of the tourist cabins. This is worth noting, especially when compared with ships of other lines, as it helps to stress the owners' willingness to allow designers the full run of the ship. The only point which must come



ABOVE: *One of the four* de luxe *suites. It has been formed by partitioning a large cabin with a thin plywood screen. On one side are the beds, wardrobes, etc, and on the other, an occasional area has been formed with a deep divan and two tub chairs. The uncomplicated modern style is well suited to this multi-purpose room.* Designer: Theodore Alexander, assisted by Stafford Unwin.

up again and again in the passenger's mind is the unco-ordinated manner in which the designers carried out their work. There can be no doubt that an opportunity to establish a landmark in ship design has been lost. A scheme for the same purpose, if co-ordinated by one designer, would still have left room for individual contributions from a variety of others.

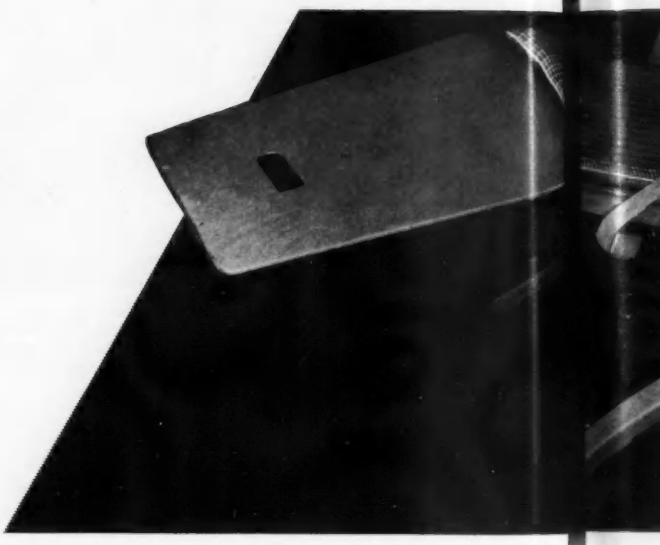
It is perhaps too easy to notice and give credit for straightforward solutions to functional problems posed by the cabins and corridors, especially when they are as successful as those of the 'Olympia', and hard to assess fairly the sincere enthusiasm which the owners and designers have put into the public rooms. The stride taken towards unconventional ship design is a long one much needed just now. Few other owners would have taken similar risks and few would be so ready as the Greek Line to welcome comments on these experimental interiors. No one could expect such a bold move to capture a new tourist trade to be much more than experimental: the 'Olympia' is after all the first ship to be built by the company since the war.

A list of contractors for the TSS 'Olympia' is contained on page 33.

RIGHT: THE CLOCKS on the 'Olympia' could have provided a welcome sense of continuity to the passenger passing from one decorative style to another in the public rooms. Instead, no two are alike, and few are related to the decorations in which they are situated. Not one of them is of really good design, although the top two shown might pass if one did not have to puzzle out the time too long. The bottom one, to be found in the tourist dining-room, is probably unrivalled as the best example of unfitness for purpose in clocks.

Deck reclining chair

The clean lines and easy maintenance of the deck cha designed by Ernest Race and soon to be used by The Orie Line, are clearly shown in this picture. The detachable cushio are covered in TYGAN.



THE ORIENT LINE IS WELL KNOWN for its advanced outlook in the design of its ships' furnishings. It is not surprising, therefore, to learn that the company sought some fresh approach to the ordinary reclining deck chair for its new liner the S S 'Orsova'.

There were sound reasons for seeking a new design for this type of chair apart from the desire for something different in appearance. One of the problems was to find materials which would not be affected by the combination of smuts from the funnel and seawater, which forms a mild sulphuric acid that eats through canvas, etc. Other important points to be considered were comfort, strength, easy maintenance and storage, simplicity of manufacture and reasonable cost.

These points seem to have been covered admirably by Ernest Race, and the result is an interesting chair of laminated ply with removable latex foam and hair cushions covered in TYGAN. The chair is comfortable and light to handle. Of the problems set him Race has this to say:

"After carefully considering the essential requirements such as comfort, construction, cost, materials, etc, I

1: *Another view of the chair. To fold one grips the top of the back and foot of the seat and the two parts fold flat together.*

2: *The chair in the folded position. Note the brass plates used for fixing the straps and to prevent bruising the wood at the points of compression.*

1

2

decided that resin-bonded laminated beech would give the greatest scope for an original solution to the problem. The material, which has been well proved in recent years in the construction of aircraft and small boats, offered the necessary strength, durability and weather resistance and, at the same time, the possibility of a visual refinement in keeping with the intended surroundings.

"After a series of experiments to determine the required dimensions two main forms emerged: one $\frac{3}{8}$-inch thick panel from which either seats or backrests could be cut, and one narrower panel $1\frac{1}{4}$ inches thick from which the four supporting members could be cut.

"The use of the related curves meant that the chair could be folded into a very much smaller space than would otherwise be possible. The folding operation of the chair was devised to eliminate the use of hinges, or any moving metal parts. With the exception of small brass plates used for fixing the straps . . . the only other material used is a four-ply canvas machine belting."

Alesbury Brothers Ltd, who make the laminated bends, co-operated with Ernest Race throughout the experimental stages. SAREZ lacquer produced by Saunders Roe Limited is used for the final spraying; it has been thoroughly tested and proved satisfactory against the effects of the sulphuric acid mentioned above.

There seems little doubt that the designer has met the challenge and produced a practical, comfortable and good-looking chair, for which one can foresee uses other than on board ship. The Orient Line has not asked for exclusive rights to the design so that we may expect to see it made available to retailers.

A.G.M

3: *A prototype of an upright chair made on a similar principle from the same moulds as the lounging chair.*

4: *The upright chair folded flat to show the small amount of space taken by using this method: a most important factor for deck furniture. It will be appreciated how easily these chairs can be cleaned down and resprayed when necessary.*

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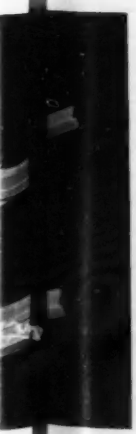
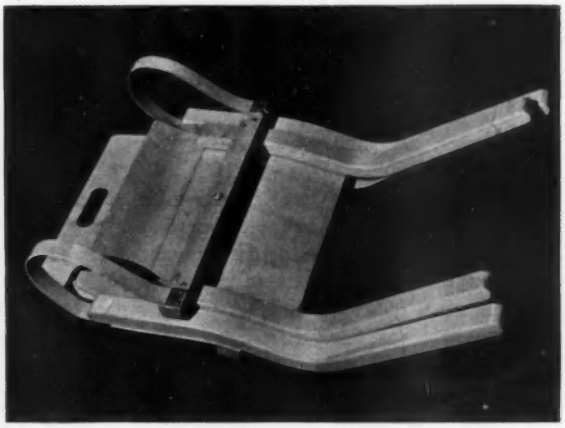




DESIGN FOR

CARAVANS

The problems of a new industry

John E. Blake

Designers of the modern trailer caravan have to reconcile the conflicting requirements of a miniature home with a vehicle capable of being towed at high speeds. These two aspects of caravan design have resulted in periodic fluctuations from popular architecture to motor-car styles as dominant influences. But as yet few caravans have established a style of their own which completely expresses their function.

The industry is still at an early stage of development and it is now apposite to discuss caravan design and manufacture. The following article is part of a survey, to be continued in four alternate issues of DESIGN, *which will examine the present position of the industry and discuss some of its recent developments.*

IT IS ESTIMATED that in Great Britain today there are between 30,000 and 50,000 people living in caravans, and six times as many caravan manufacturers as there were in 1939. This rapid expansion can have few equals in other industries and has played a greater part in our post-war society than is generally admitted. The cause was initially a shortage of houses; the caravan being an alternative, and usually a cheaper alternative, to the permanent 'prefab'. Caravans offered a sense of freedom and an open-air life which many had experienced during the war and wished to continue. The cost was favourable, for caravans are

not merely homes, they are *furnished* homes, with only minor accessories to add. Maintenance costs are not excessive and there are no rates and taxes apart from the ground rent paid to the site operator. In general, providing the site is well organised, as only too few of them are, and providing the van is built to withstand the English weather, the case for living in caravans is strong.

Yet there is much that is unsatisfactory in the industry and much that can be improved. Seldom has design played a more important part, and seldom has it been less consistent. In this survey, therefore, an attempt will be made to trace the evolution of design from its roots in the showman's and gypsy vans of the nineteenth century, to analyse the structure of the industry as it is today, to discuss some of the problems with which designers are faced and to show some recent models which suggest new lines of development. To obtain my information, I visited eight firms selected from a list of over 50 manufacturers whose models have shown a consistently high standard of quality, and who are approved by the National Caravan Council, a trade organisation which represents all other aspects of the caravan movement as well. Three of these are in the London area, one is in Hertfordshire, one in Birmingham, one near Norwich and one near Bournemouth. One was registered in 1919 and is among the oldest firms still making caravans; another started in 1952. Three could be described as mass-production firms, the largest (and incidentally one of the largest in the country) producing 2,500 caravans a year and employing over 300 men. The smallest firm I visited employs little over a dozen men and produces under 50 vans a year. I also obtained much valuable material and assistance from W. M. Whiteman, editor of the CARAVAN and the CARAVAN AND TRAILER TRADES JOURNAL.

Shortcomings in design

Many of the models which I saw were a paradox of good and bad design, of careful thought and hurried crudity. Space is often used with ingenuity though there is lack of co-ordination in the design of individual units. In many cases, like the buildings of Queen Victoria's reign, the exteriors are designed with little heed for the living spaces to be organised inside. Finish is often shoddy and the range of standard fittings available to manufacturers is poor. Colour is uninspired, little effort being made to depart from the use of cream paint both inside and out. The choice of fabrics for covers and curtains is, in many cases, unsuitable, the designs being mainly conventional, out of character, and of the wrong scale. These points will be discussed in more detail in later articles.

The lack of stability in the caravan industry is largely responsible for these shortcomings. After the last war the unsatisfied demand for houses gave the industry its chance to expand. Though the larger and more progressive firms built some very satisfactory models for permanent accommodation,

The nineteenth-century showman and gypsy vans established a tradition of design which perfectly expressed the caravan's purpose. The richly carved and painted decoration grows directly out of the structural members and is seldom applied arbitrarily. The wooden framework, lined internally with matchboarding, creates its own pattern. Provision for ventilation and extra headroom is made in the lantern roof. The caravan is high off the ground to clear the carriage wheels. This model was recently exported to the U S A, and makes an interesting comparison with the BERKELEY *'Europa', shown here, a modern caravan designed for export and discussed on page 30.*

Above: A horse-drawn holiday caravan of about 1910. In general conception there is little change from the gypsy caravan though most of the individual character of the earlier models has been lost. The door is still at the front and the side-to-side 'roll' roof with its extensive overhang has been retained. The main changes are in the materials used – a wooden framework with external plywood panelling sometimes covered with canvas as an extra protection. Casement windows have replaced the sash type and the wheels are smaller, allowing the van to sit lower on the ground.

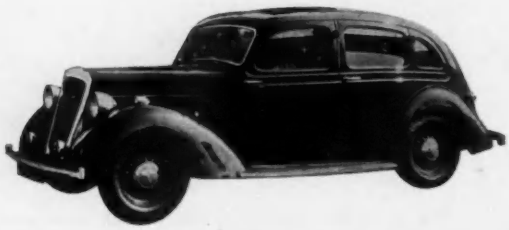
One of the early motor-trailer caravans built in the 'twenties. This model is an expression in embryo of conflicting ideas which at different periods were to have a growing influence on caravan design. The side-to-side 'roll' roof which has given way to a curve extending from front to back, and the curved and sloping end walls, were designed to express speed and mobility – an early conception of streamlining. At the same time, the tiny bay windows, the diamond panes and the painted beading reflected the 'cosy cottage' styles of the new suburban houses. Compare with this example of inter-war 'by-pass' architecture.

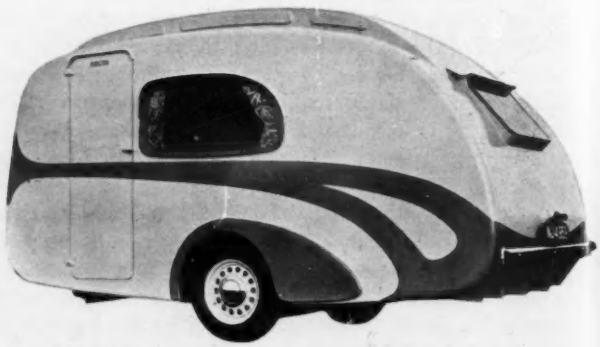
One of the first streamlined caravans produced by O. G. Lywood Ltd in the early 'thirties. Popular architecture has given way almost entirely to the motor-car (and more remotely the aeroplane) as a source of inspiration in design – a symbol of the new era of speed. It followed directly from American motor-car styling (compare with the 1934 CHRYSLER) though in some ways it was carried further than on English cars. The relationship, however, between the square windows and doors and the curved profile is unhappy, lacking the integration of shapes which the motor-car designer had already achieved.

This small version of the Lywood caravan illustrates the growing emphasis on lightness of construction to avoid roll when the caravan is being towed at speed – one side is being lifted off the ground with apparent ease by one man. Weight was reduced by covering only the lower section with plywood, the upper part consisting of canvas stretched over the wooden frame. Windows hinged along the top were an innovation at that time.

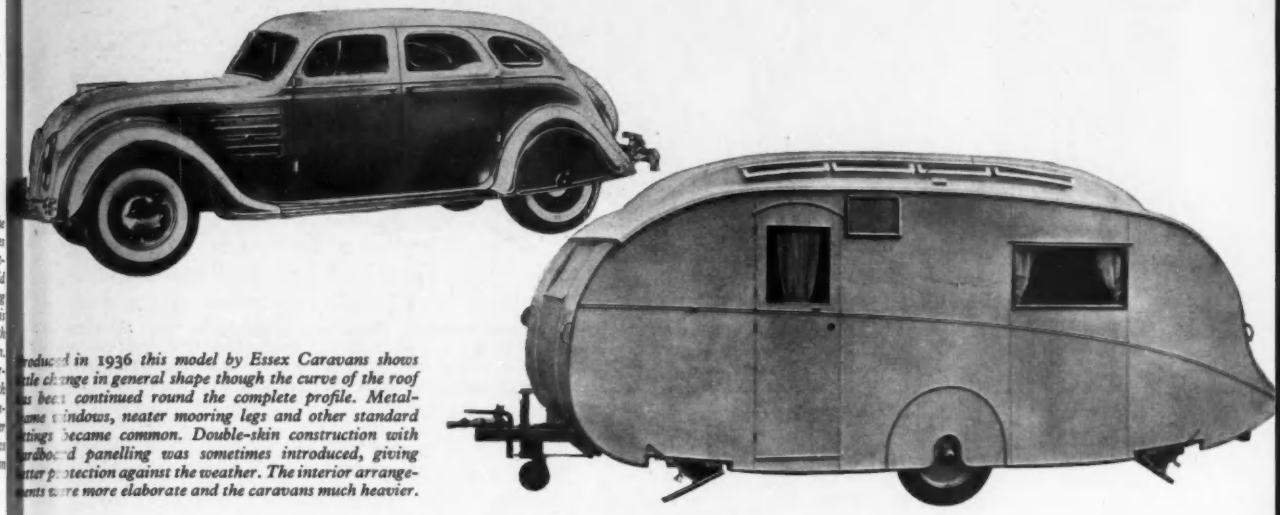
there were many unreliable caravans made by manufacturers who were anxious only to 'cash in' on the sellers' market. No one knows with certainty exactly how many caravan manufacturers there are in this country, though estimates show that the number has fallen from over 300 two years ago to about 100 today. A large number of firms consist of no more than one or two men who build their caravans entirely by hand often with little experience and primitive equipment. These are the 'backyard' builders, the *bête noire* of the more responsible firms who feel that a great deal of harm is done to the industry by the models of poor quality which they often put on the market. Some firms, already producing coach bodies or various types of agricultural and industrial equipment, took advantage of the 'boom' period and started making caravans as a side-line. Of these a number failed through lack of knowledge, others have benefited from their previous industrial experience and have made valuable contributions to the development of caravan design. But the buyers' market is returning, the backyard builders are being forced out of business and fewer badly made models are now produced.

Less fortunate for the general well-being of the industry may be the disappearance of the small firms who, without the benefits of machine production, concentrate on the expensive 'de luxe' models made by skilled craftsmen. These firms have done much to point the way to the high standards of quality that can be achieved.





This model, produced in 1937, shows how the rather crude streamlining of the 'thirties has been refined and brought more in line with motor-car styling. This is particularly noticeable in the integration of the window and door shapes with the general profile of the caravan with its curved front and long sweep to the rear. Compare this with the 'Flying Standard' model produced in the same year. The projecting rear window, however, is less satisfactory – the problem of fitting a flat opening window in the curved rear would have been tackled more thoroughly in the motor industry. The painted aerofoil shapes were typical applied decoration of the period and have practically disappeared on caravans, though they are still common on some motor-coach bodies. The leaded glass, however, can still be seen on many caravans today and is quite out of character in this context. This model has an aluminium outer skin with plastic corners.

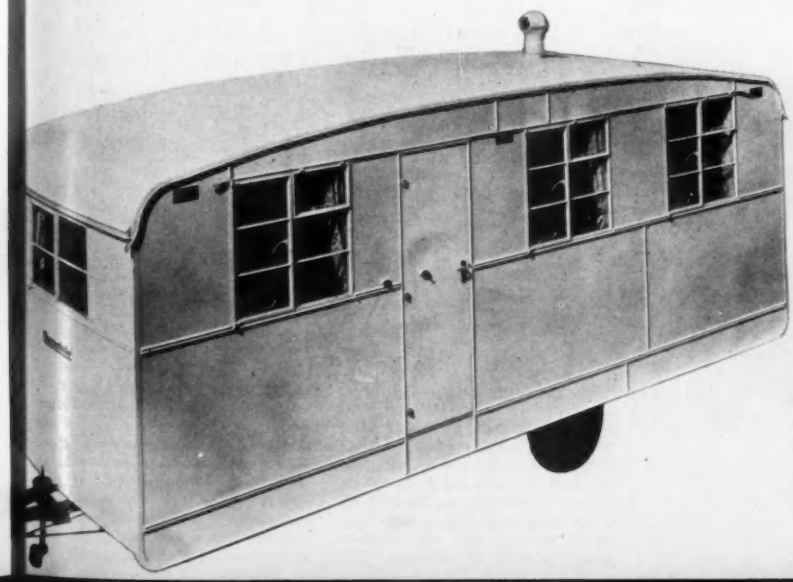


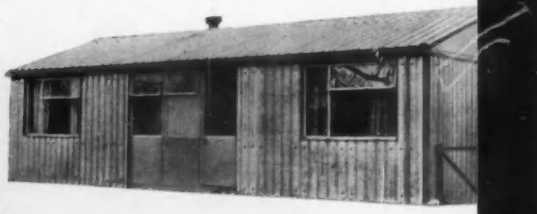
Introduced in 1936 this model by Essex Caravans shows little change in general shape though the curve of the roof has been continued round the complete profile. Metal-frame windows, neater mooring legs and other standard fittings became common. Double-skin construction with hardboard panelling was sometimes introduced, giving better protection against the weather. The interior arrangements were more elaborate and the caravans much heavier.

Even the biggest firms are not large by modern standards. Consequently the variety in the types and sizes of vans is much greater than in the products of the more developed mass-production industries. One firm may produce a basic model, but the size, the interior arrangement and the quality of finish may be varied to suit individual customer's requirements. This is characteristic of most industries in which hand craftsmanship still plays an important part. With the development of more advanced mass-production techniques the number of models built to special requirements will inevitably be reduced. Each model will have to satisfy a number of conflicting requirements and will therefore need to be more adaptable. A system of planning, possibly based on the principle of modular co-ordination, might well prove to be the answer to such a problem. A great deal more careful thought will be needed during the design and development stages than is now considered necessary. Scale models, full-size mock-ups and several working prototypes will be required before the expensive 'tooling-up' process is undertaken. It is here that the work of the experienced and qualified designer will be of most value.

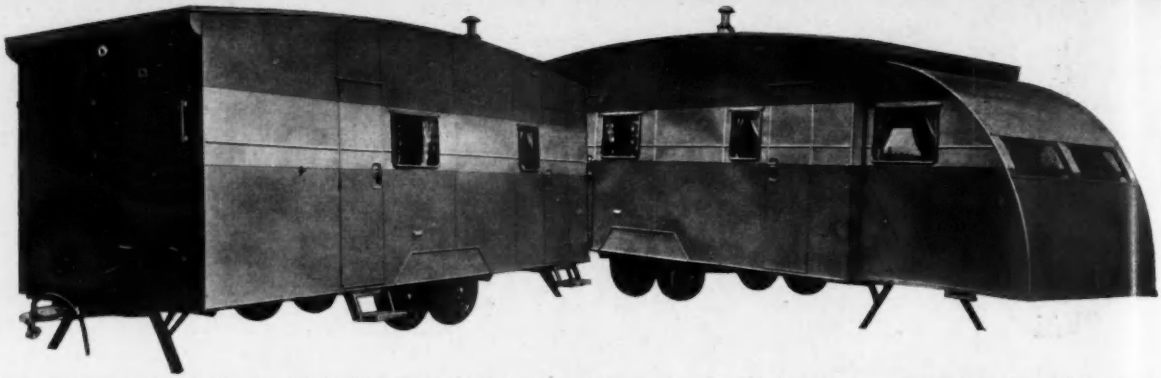
Early designs

The origins of caravans are obscure. Opinions vary, and though many assume that modern trailers are derived from the gypsy caravan, there would seem to

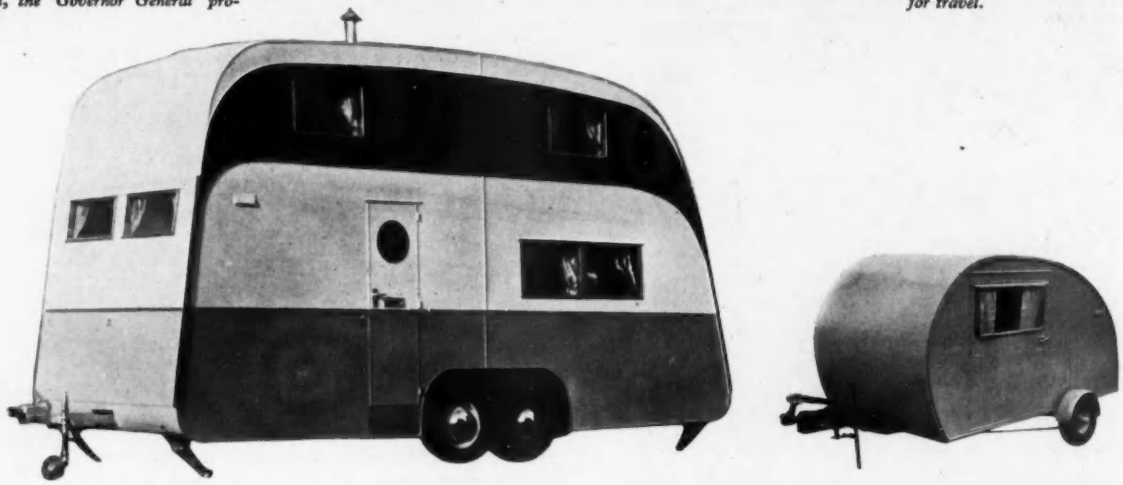




A complete swing after the last war from the motor-car to the prefabricated house as the dominant influence in design expressed the new purpose of the caravan. Many families who had no houses bought or hired caravans to live in. This model produced in 1949 by the International Caravan Co Ltd is virtually a small home on wheels and is similar in many ways to prefabricated houses such as the ARCON *Mark V, illustrated here. The curved lines of pre-war caravans with their emphasis on movement and direction have given way to a boxiness with vertical walls giving a static quality.*



Regulations restricting the length and width of caravans are severe limitations where large models are required for permanent homes. This extendable model, the 'Governor General' produced by Berkeley Coachwork Ltd, is one of the largest 'mobile homes' that has been built in this country. With the ends closed in readiness for towing, it has an uncompromisingly box-like appearance with no concessions to styling. When extended it is 34 ft long and will comfortably sleep six people. Paradoxically, when the caravan is fully extended the curved ends give it a greater appearance of mobility than when the ends are closed in readiness for travel.



This two-storey caravan, the 'Diplomat' made by Peak Caravans Ltd, is among several types designed to overcome the restrictions on length. It is one of the few very large and heavy caravans produced since the war which has successfully reconciled the requirements of a house with the appearance of a mobile unit. The overall shape is good, though the three painted horizontal bands are unnecessarily complicated.

In complete contrast to the BERKELEY *'Governor General' is this tiny 10 ft sleeping trailer produced by the same firm. This model, which can be towed by an 8 hp car or a motor-cycle and side-car combination, has been designed to appeal to the lower income groups and to provide a rather more comfortable method of camping than is normally possible with a tent. The sweeping curve of the roof has varied little from pre-war models.*

Efforts to bring caravans more in line with present-day motor-car styles are now being made by several firms. This 'Lynx' model produced in 1953 by O. G. Lywood Ltd is one of the most successful using largely traditional methods of construction. Particularly noticeable is the painted waistband which imitates this characteristic feature of post-war motor-cars. The sweep of the forward and rear windows with their curved PERSPEX *corners is also derived from the windscreens and rear windows on some modern cars. Besides providing excellent visibility from within they also serve to give directional emphasis. The proportions and quality of finish on this model are excellent though the curve of the roof appears to be slightly exaggerated.*

be more evidence to support the theory that it is the showman's caravan which is the true predecessor. The traditional gypsy van was little more than a covered cart which was used only to carry the baggage of the colony; the gypsies themselves cooked and slept outside. The travelling showman's van, on the other hand, was essentially a small house on wheels and this is much more in line with our modern conception of the caravan's function. These early models were richly carved and painted and many of them were acquired by the gypsies who built similar versions of their own.

Long before 1900 the caravan habit was established as a fashionable pastime for the well-to-do, and is a direct expression of the growing interest in the countryside which was a characteristic of the later nineteenth century. They regarded the gypsies as pioneers of the simple open-air life and described themselves as 'gentlemen gypsies'. Most of their caravans, however, were very much larger and heavier than the showman or gypsy vans and often two horses were needed to pull them. By about 1910 they had become extremely elaborate and were fitted with an extensive range of equipment including built-in furniture, water closets, baths and coal-burning stoves – one was even fitted with a grand piano. The formation of the Caravan Club in 1907 testifies to the growing popularity of caravanning at that time.

In general appearance caravans followed the gypsy's and showman's vans fairly closely. They were high off the ground and were lined inside with matchboarding, the external framework being allowed to show. The curve of the 'roll' roof was from side to side and sometimes lantern roofs were introduced. Most of the early models were specially built for customers, though there were a few firms before the first world war which were making vans for sale commercially. Lightness of construction was becoming increasingly important and external plywood panelling, often covered with canvas as an extra protection, became common. Wheels were smaller allowing vans to sit lower on the ground, but the 'roll' roof with its extensive overhang at the ends was still retained.

Streamlining and sales appeal

The industry received its first big boost in the 'twenties when the motor-car made apparent the possibilities of the true trailer caravan as we know it. More consideration had to be given to towing characteristics, and streamlining began to make its appearance. At the same time the insidious influence of Tudor suburban architecture emerged in such details as diamond-paned or bay windows. This is an early reflection of a growing conflict in caravan design which must reconcile the requirements of a compact house with those of a fast-moving vehicle. At different periods caravans have veered either towards an imitation of popular architectural styles or towards an exaggerated streamlining to emphasise their mobility. The conflict has remained the root of the caravan designer's problem and even today is seldom resolved satisfactorily. That caravans should develop shapes directly expressive of their function in relation to the materials used and methods of construction is a point which only too often has been obscured by attempts at fashionable 'styling'.

The emphasis on streamlining was a dominant characteristic throughout the 'thirties and reflected the growing influence of the aircraft industry on appearance design. Aerofoil decoration was typical of the period and is still common on motor-coaches though on caravans it has practically disappeared. One brochure of the period went so far as to state "If all vehicles on the road today were streamlined, the saving in petrol consumption would pay the Dole". But it was largely the popular appeal of the style which mattered for there was little proof that streamlining was such a substantial effect. Compared with models of a later date caravans were extremely light in construction. The aim was to keep the centre of gravity as low as possible to avoid roll when the van was being towed at speed. Often only the lower section was panelled with plywood, the upper part being covered with canvas which was stretched over the wooden frame. Metal-frame windows, hinged along the top edge, were a new feature designed, according to the same brochure, "so that they can be kept open in the rain". Wooden mooring legs, however, were still crude in conception and would soon rot if left standing on wet ground.

In general the growth of the industry was slow until about 1937 when a tremendous expansion began to take place. The founding of the magazine CARAVAN in 1933 anticipated rather than reflected the growing interest. Prefabrication and jig building were introduced by the larger firms enabling much bigger outputs to be achieved. More use was made of the new fibreboards which were becoming available in increasing quantities and which were found to be cheaper and more effective than plywood. A greater variety of standard fittings was also available and helped to solve production problems. Competition increased both for price and quality. People were no longer satisfied with the single-skin construction of the

old models which gave inadequate protection against cold and rain. Double-skin construction was introduced on a limited scale with foil, kapok fibre or cork insulation, and aluminium was occasionally used for the outer skin, giving a better finish to the exterior. Caravans became heavier and the kitchen, always the heaviest part, was built over the axle to increase stability for road travel.

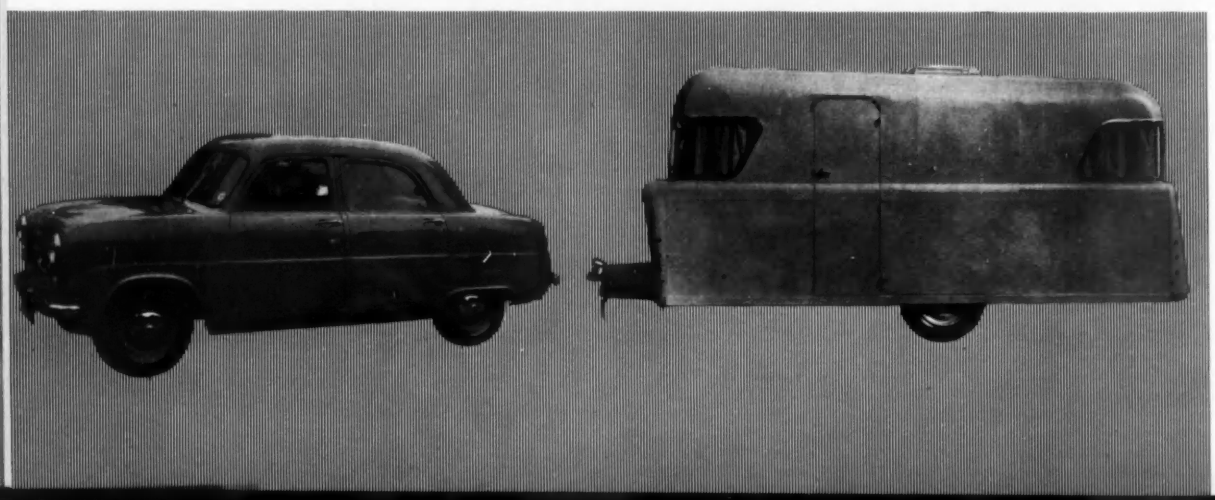
The 'mobile home'

During the six years of war, production of caravans was greatly reduced or was directed to the construction of special models such as mobile canteens, offices, etc. After the war, however, the emphasis on caravans as permanent homes for families produced a new attitude towards design. The streamlining of the 'thirties, with its exaggerated curves suggesting motion, gave way to a boxiness which imitated the 'static' architectural character of small houses. Efforts were made to overcome the Ministry of Transport regulation limiting the length of caravans to 22 ft and the width to 7 ft 6 inches, and a variety of designs, some with two storeys, some with elaborate devices for making extensions, began to make their appearance. Many technical improvements in such things as ventilation, insulation, heating, braking systems and so on, were made by the more responsible firms, largely as a result of recommendations by the National Caravan Council.

But the boom period in the caravan industry is now largely over. The increased rate of building new houses has removed the urgent need for temporary alternative accommodation. There is no longer a market for the shoddy, poorly made models. The industry is beginning to feel its way along new channels and once again the holiday caravan, claimed by many to be the only true type, is becoming predominant. Tiny vans, capable of being towed by 8 hp cars, or even by motor-bike and side-car combinations, are making their appeal to new income groups. One manufacturer is experimenting with the large-scale production of a caravan made of a pressed steel skin over a welded steel framework – a method of construction which is new to the industry in this country. Others are finding more efficient ways of producing models of traditional construction and are pinning their faith on new styling and lower prices. In both methods there are inherent dangers. New materials are liable to misuse and where the firms are small the amount of money available for research and development is limited. On the other hand styling is seldom satisfactory unless careful thought is given to the problem by a competent designer. The manufacturer who relies on styling alone may well find himself left behind his competitors who have developed more efficient and modern construction techniques.

These are the chief design problems which face the industry today. The way in which they are being tackled will be discussed in subsequent articles. DESIGN for April will contain an account of the various techniques used in caravan building and the way in which new developments may affect design.

Of the many new models produced in recent years, the BERKELEY *'Europa' is probably the most advanced in conception. Its method of construction – a pressed steel skin over a welded steel framework – is new to caravans in this country. Though the attitude of many firms to this experiment has been cautious, largely on account of the rust danger, it may well prove to be a major step in the industry's development. The 'Europa' is a touring caravan designed primarily for export to the Continent. With its horizontal waistband and curved corner windows, it is one of the first models produced since the war to emphasise the close link with contemporary motor-car styling (compare with the* FORD *'Consul'). The corner fairings, containing mooring legs, rear lamps and lifting handles together with the covered drawbar, are the beginnings of an attempt to integrate a number of normally rather untidy features – a process which has yet to be carried through successfully in the interior. This model, the 'Lynx' and four other models will be examined in more detail in a later article.*



NEWS

R C A students for industry

The Royal College of Art has announced that of the 59 students leaving the industrial design schools of the College in the summer of 1953, 44 have obtained posts in industry, three are working as free-lance designers, three are teaching, two have won travelling scholarships, and the remaining seven include a married woman, a permanent invalid, two who are still seeking suitable posts and three who have lost contact with the College. This compares with the figures for 1952 when out of 50 students who left the industrial design schools, 35 obtained posts in industry, five are free-lance designers, eight are teaching and two were still unemployed at the time the announcement was made. These figures take into account the period of nine months which industrial design students are obliged to spend working in industry before they can obtain the DES RCA diploma. It is emphasised that firms taking students for this period regard it as regular employment and not a continuation of the students' period of training. Most students stay with the firms which first employ them, though there are, of course, those who change to different firms, become free-lance designers or who become teachers. Some students complete their nine months in industry before or during their attendance at College and these qualify for their DES RCA immediately on leaving. Only in special circumstances, where industrial design students are considered to be unsuitable for industry, may the ARCA diploma, normally given to fine art students, be awarded.

In some fields – notably commercial art, pottery and furniture – the demand for young designers leaving the College exceeds the supply. Many concerns now visit the College early in the year and establish contact with a student who is leaving in July, with a view to employing him when he is fully trained. Meanwhile, he is often offered employment for part, at any rate, of the holidays. This enables the student to prepare realistically for the particular problems of the firm into which he is going, thus making the change from College to full-time employment easier. It is also a great advantage to the firm, for it provides an opportunity to find out whether the student is likely to be suitable.

The Royal College of Art is sometimes criticised for encouraging all its design students to go into industry, thus starving the art schools of the best young industrial designers, some of whom ought to be going back to teach. It is therefore interesting to note, during the last two years, that at least three pottery designers, two furniture designers and one silversmith have left industrial concerns to take up posts in art schools, while others are teaching part-time.

CoID courses

The first of the retail courses which have been organised by the CoID for 1954 will be held at Attingham Park, near Shrewsbury, from February 8–12. This course, on furniture and soft furnishings, has been arranged for senior representatives of retail management and has been planned to cover the wider aspects of design policy.

Speakers will include Gordon Russell, Director, CoID, on 'The Retailer's Responsibility'; George Trevelyan, Warden of Attingham Park College, on 'The Modern Movement'; J. P. McCrum, industrial designer and consultant, on 'Design and Manufacture of Furniture'; Alastair Morton, Director, Morton Sundour Fabrics Ltd, on 'The Design of Carpets and Fabrics'; and Jean Stewart, Retail Officer, CoID, on 'Display of Furniture and Furnishings'. A special exhibition of furniture, fabrics, light fittings and accessories will be staged during the course. The inclusive charge per head is £7 17s 6d.

Another CoID course, to be held at the Wedgwood Memorial College, Barlaston, from March 1–5, has been arranged for buyers and senior salesmen of pottery.

Speakers for this course will include G. J. U. Bemrose, Curator, Stoke-on-Trent Museum and Art Gallery, on 'History of Pottery Making'; Christopher F. Johnson, Johnson Bros (Hanley) Ltd, on 'Earthenware – Methods of Manufacture'; J. E. Hartill, Managing Director, Mintons Ltd, on 'Fine China – Methods of Manufacture'; Victor Skellern, Art Director, Josiah Wedgwood & Sons Ltd, on 'The Problems of the Designer – Shape and Decoration'; Alec Heath, free-lance display designer and consultant, on 'Displaying Pottery'; and S. W. Low, Buyer and Manager of pottery and glass, Heal & Son Ltd, on 'The Retailer's Responsibility'.

The course will include visits to factories and there will also be a small exhibition of tableware. The inclusive fee will be £8 8s 0d.

Further details about these courses may be obtained from Jean Stewart, Retail Officer, Council of Industrial Design, Tilbury House, Petty France, London SW1.

Liverpool University lectures

The Faculty of Arts at the University of Liverpool has invited Gordon Russell, Director, CoID, to become a special lecturer in the Sydney Jones Lectureship in Art for the 1954–5 session. Four lectures will be given this year on the common theme 'Contemporary Trends in the Fine Arts'. Mr Russell will speak on furniture and interior decoration.

New sherry pack

W. & A. Gilbey Ltd recently commissioned Milner Gray of Design Research Unit to redesign the bottles and labels for the firm's range of Spanish sherries. The successful result of this commission can be seen in this illustration which shows the contrast between the new design, left, and an old standard bottle. The curved shape of the label marries well with the bottle's elegant and subtle tapers. Note the new rendering of the firm's trade mark.

Outdoor furniture competition

A special display of well-designed outdoor furniture, sponsored by the Royal Horticultural Society, will form part of the 1954 Chelsea Flower Show to be held during May. The CoID has been asked to stage the display and to select the exhibits, which will be chosen from 'Design Review', the CoID's illustrated index of good current designs. Photographs of seats which were awarded diplomas in the CoID outdoor seats com-

Elegant desks

At the recent opening of their new showrooms in Hanover Square were these desks by Finewood Products Ltd which will shortly be in production. They will be available in straight-grained French walnut or natural oak, though other woods may be used for customers' special orders. The drawer cabinet on the right of the larger desk contains one shallow drawer and a deep one below. This has an additional false handle to match up with the three drawers on the left. The desks, elegant in proportion and practical with their large, overhanging tops, were designed by Leslie T. Corke, of the firm's staff.

petition (DESIGN June 1953 pages 30-2) will automatically be considered when the selection is made. To ensure that other new designs which are either in production or at development stage are not overlooked, manufacturers are invited to submit photographs or drawings. The cost of the display will be met partly by the Royal Horticultural Society and partly by contributions from manufacturers who will be required to contribute a sum of not less than £4 for each item selected. Submissions and enquiries should be sent to Major-General J. M. Benoy, Acting Chief Industrial Officer, The Council of Industrial Design, Tilbury House, Petty France, London SW1.

'Topham Trophy' competition

Prizes of £300, £100, £50 and ten honourable mentions of £12 10s are offered for the design of the 1954 'Topham Trophy'. The trophy should illustrate a theme related to horses, racing or jumping, and entries may be submitted as completed works, sketch models or scale drawings. The competition is open to all present and past members of the teaching staffs and students of colleges and schools of art in Great Britain and Eire and entries must be submitted not later than March 9, 1954. The judges will be Alderman W. John Tristram, Lord Mayor of Liverpool; Alderman Vere E. Cotton, Chairman of the Libraries, Museums and Arts Committee for Liverpool; T. H. Scrutton, Director, the Walker Art Gallery; Robin Darwin, Principal, Royal College of Art; Alister Maynard, Chief Officer, CoID Scottish Committee. Further details from the Organiser, Topham Trophy Competition, 34 Huskisson Street, Liverpool 8.

Competition trophy

This new trophy, designed by R. E. Stone, has been presented by the monthly journal DISPLAY *to the Display Producers and Screen Printers Association for competition among its members. The trophy is eight inches in diameter and is made of silver and sycamore. It was presented this year to Apex Studio (London) Ltd for the best display entered for the Association's competitions.*

'Round the Table' on tour

A touring version of the 'Round the Table' exhibition, organised by the CoID and held recently at the Tea Centre, will shortly be available for hire by retailers interested in promoting their tableware sales. The exhibition is devoted to pottery, glass, cutlery and flatware, displayed in eight furnished settings. It should be of particular interest to department stores as it will give them an opportunity of showing goods together where they are normally displayed in separate departments. The tour opens at Beales of Bournemouth on February 4 and is available for further bookings after April 10. Further details can be obtained from Jean Stewart, Retail Officer, Council of Industrial Design, Tilbury House, Petty France, London SW1.

Show house at Olympia

The CoID has been invited by the Ministry of Housing and Local Government to co-operate in the furnishing of a show flat at the 1954 'Ideal Home Exhibition' to be held at Olympia from March 2–27. The flat will consist of a living-room, two bedrooms, a working kitchen and a bathroom, and is part of a scheme designed to show how a typical terrace of old London houses can be converted into a series of flats with each flat covering one floor of two adjoining houses. Mr and Mrs R. Wetmore have been commissioned by the CoID to choose the furnishings from a retailer's stock. The retailer, Williams' Furniture Galleries of Kilburn, was selected by means of a draw from a number of applicants.

Three exhibitions

Pottery

Johnson, Matthey & Co Ltd will be holding an exhibition of contemporary designs for the decoration of tableware at the firm's showroom, William Clowes Street, Burslem, Stoke-on-Trent. The exhibition will be open from February 8–19.

Silverware

'A Century of British Silversmithing' is the title of an exhibition, organised by the Crafts Centre of Great Britain, which is on show at 16–17 Hay Hill, Berkeley Square, London W1 now until February 5.

Furniture

The fifth British Furniture Manufacturers' Exhibition will be held at Earl's Court from February 15–25.

Productivity in furniture

The British Productivity Council's latest report is devoted to a review of productivity in the furniture industry. One of its most interesting comments refers to the industry's close association with aircraft firms during the war, particularly in connection with the making of gliders and Mosquito aircraft. The chief benefits of this association, the report says, were felt in the organisation of the industry rather than in technical advances. But the point seems to have been missed that far greater progress could have been made if the industry had more frequently drawn on its wartime experience of aircraft construction techniques. This applies particularly to the development of formed laminates which until recently have been largely avoided by furniture manufacturers in this country. The few experiments that have been made so far have generally been most successful, but clearly there is scope for much greater development along these lines.

Emphasis is given to the harmful effect on manufacturing efficiency of the frequent changes in design often demanded by retailers. "At one time retailers used to demand three new designs a year and often two are still requested; however, the industry is trying to limit the changes of manufacturing design to one a year – in time for the [British Furniture Manufacturers'] exhibition. This demand for frequent

Forthcoming exhibition at Heal's

This dining-room furniture is one of several new designs by Heal & Son Ltd which will soon be shown for the first time in an exhibition at the firm's premises in Tottenham Court Road. Instead of taking a stand at this year's 'Ideal Home Exhibition' Heal's are planning to turn over the whole of their fourth floor to a large exhibition covering their complete range of domestic furniture, furnishings and equipment. The exhibition, which will be open on February 23, is expected to last for about three months. The furniture shown here was designed for Heal's by Nigel Walters and is made of teak and beech. The sideboard has a fall front and four drawers which are fitted with neat spun-brass handles. The chairs are exceptionally comfortable and are upholstered with DUNLOPILLO *over a formed plywood base. Lucienne Day designed the curtain fabric.*

changes would appear to come from the retailer rather than from the consuming public." There is certainly no need for such frequent changes, for unlike many other industries where products normally have to last at the most for two or three years, furniture often has to serve for the best part of a lifetime. "The current demand for changes in design by no means rules out the simplification and standardisation of components; to reconcile them offers a challenge to ingenuity which makers will undoubtedly meet."

The Appendix to the report provides a valuable detailed analysis of 20 firms (largely chosen at random) which have substantially stepped up their production since the war. Some relevant points from this section are brought out in the following quotations:

HARRIS LEBUS LTD. The largest British firm in the industry though the number of employees is not given

"The main recent organisational development relates to design. Both design and preparatory planning have been placed under the same head. This has been done to ensure that, before a design is agreed upon, careful consideration is given to the methods of production to be adopted on the shop floor and to any difficulties in production which might arise."

"As with other furniture manufacturers, Harris Lebus Ltd comes up against the retailers' demands for over-frequent changes of design. Both the design and the methods departments keep themselves abreast of what is being done abroad as well as elsewhere in Britain."

BIRCH LTD. 250 employees

"A planning department has now been set up with a small staff. The designer works in collaboration with the planning group in the preparation of designs, although he is allowed to put sales appeal before production requirements. The group consists of a director, the estimator, a production executive, and the designer. Consideration is given at the design stage to the methods of breaking down operations to be employed in production, to the possibility of using new machines and to the methods and jigs most suitable."

ALSTONS (LONG MELFORD) LTD. 125 employees

"Once a year a suggestion scheme is operated and suggestions, particularly on design, are invited and rewarded."

P. LEACH PRODUCTIONS LTD. Number of employees not given

"Contemporary designs have called for the installation of new shaping machines and among those installed by the firm have been a dome and a vacuum press."

D. MEREDEW LTD. 420 employees

"The main development of the company in the last three years has been to work out a new sales policy and a related production policy. Having chosen a range of pieces, the company has concentrated on this to the exclusion of other production. Moreover, many of the pieces are made up of standard units (or sub-assemblies) which can be grouped in various ways to make different end-products. The units are also sold separately to some retailers, who use them in different assemblies for the solution of their customers' special storage problems. The result of this sales policy is that production of standard parts and assembly of them can be undertaken without stoppage. The machining room works steadily to maintain stocks and its work is controlled by the size of various parts in store. The size of these is agreed on the basis of prior and current demand. Stocks are also kept of the units or sub-assemblies and the programme of work in the sub-assembly departments depends on sales. Both in sub-assembly and final assembly the runs are continued as long as possible.

"As a result of this policy Meredew Ltd is able to offer delivery of all items of furniture required by a retailer at the same time, whereas it is a common policy in the industry for a manufacturer to concentrate on producing a special article or type of furniture for a given number of weeks, so that delivery of other items has to wait."

"During the last three years – since the introduction of this policy and programme – the firm has doubled its output, although the productive labour force has been increased only by about 25 per cent."

A REVIEW OF PRODUCTIVITY IN THE FURNITURE INDUSTRY costs 2*s* and may be obtained from the British Productivity Council, 21 Tothill Street, London SW1.

LETTERS

A reply to Mr Kinneir

SIR: I am distressed to find that a magazine of your standing should sponsor opinions of such narrow commercial pedantry as those expounded by Mr Kinneir (Letter DESIGN January page 37).

Mr Kinneir is "sure that the contents of the National Portrait Gallery is (*sic*) part of the fabric of the national tradition, but it is most emphatically not promoting exports. Is it really sacrilege to suggest that the contents be microfilmed and the site – what a site – given the breath of life?" I think that, if for 'sacrilege', which has fine provocative overtones of lone and lost causes, one substitutes 'narrow-mindedness', the answer to Mr Kinneir's question is 'yes'.

I cannot quite make out from Mr Kinneir's somewhat involved statement exactly what he proposes to put in place of the portraits when he has microfilmed them; but apparently some "authoritative guide for the public to give the timid courage, the crafty art, the gormless wits . . . " Who will this guide be? Mr Kinneir? Or yourselves? Or perhaps Prince Albert? And by what authority are any of those authoritative? Mr Kinneir would, I suggest, find a better guide, to "give the timid courage" etc, in the faces and the history of the men whose portraits hang in the National Portrait Gallery, and whose records show that greatness is diverse as mankind and taste as fickle as the weather. I note that the Gallery does not promote exports; neither do Nelson's Column, escapologists or the blue sky above. Let's microfilm them too. The Gallery is, however, proud to be a very visible part of that most important invisible export described by Mr Kinneir as the "national tradition".

There is at present a tendency to be interested in exhibition, rather than in the things exhibited: a taste to which I fear magazines like yours contribute by the romantic brilliance of your photographs: those strange rooms, frosty with sub-Scandinavian furniture, where no living being has ever trod except perhaps abominable showmen; those glamorous close-ups of the pot in reconciliation with the kettle; those chairs in vigil where the ivy weeps. What drama! What romance! But I do not wish to become emotionally involved with my plate-rack, nor to find it laden without means of support in a black void: I wish to see it in relation to a wall, firmly screwed in, sturdy and good and *quiet*.

You state in your editorial that "the best way of projecting the idea of British quality is to select the best British goods in any particular range and show them". The National Portrait Gallery is in full sympathy: it shows as many as possible of the best goods in British history, the great who made that history, and it leaves the pictures as far as possible to speak for themselves.

DAVID PIPER
Deputy Director
National Portrait Gallery
London WC2

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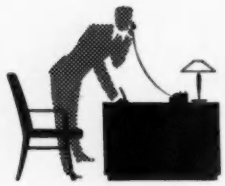

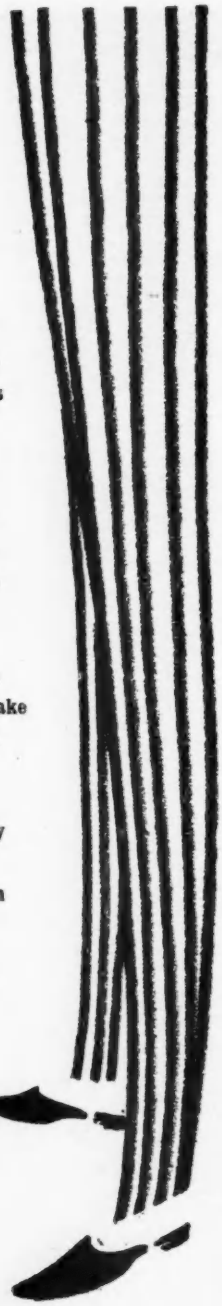

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